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Issue 2026/05

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A | Toys & Children's Products

A.1 Update to U.S. 16 CFR Part 1233 Standard

16 CFR Part 1233 will update its referenced standard from ASTM F1235-18 to ASTM F1235-25 Standard Consumer Safety Specification for Portable Hook-On Chairs, with an effective date of 19 July, 2026. All products manufactured on or after the effective date must be tested and certified in accordance with the revised CPSC rule.

Compared with the previous version, the main technical changes are as follows:

- Updated the naming conventions for certain terms in Clause 3 and added part-of-speech labels to enhance the precision of the language.
- Added Definition 3.1.8 for "protective component" to clarify its scope.
- Revised the requirements for "protective components" in Clause 5.10, specifying that all child-accessible protective components on or around the product must be included in the safety assessment.
- Added Clause 6.8 "Battery Compartments" (excluding remote controls), together with the corresponding new test method 7.14.
- Added safety requirements for AC adapters.
- Fully revised the content and format requirements for "Marking and Labeling" in Clause 8, including new requirements such as battery specifications, battery compartment safety warnings, and permanent labeling for non-replaceable batteries.
- Revised the content requirements for "Instructional Literature" in Clause 9.

A | Toys & Children's Products

A.2 Hong Kong Updates Safety Standards for Toys and Children's Products

On 3 March 2026, the Commerce and Economic Development Bureau (CEDB) of Hong Kong SAR Government confirmed its earlier proposed updates to the safety standards (the Standards) for toys and children's products in Schedules 1 and 2 respectively to the "Toys and Children's Products Safety Ordinance (Cap. 424)" (the Ordinance).

Notice for the Updates of the Ordinance (Gazette Number: L.N. 23 of 2026) is now available in the Gazette List.

Such updates are to implement up-to-date safety standards promulgated by the relevant reputable standardisation bodies for toys (Schedule 1) and children's products (Schedule 2).

Schedules	Products	Original Standards	Updated Standards
I	Toys	BS EN71-3:2019+A1:2021	BS EN 71-3:2019+A2:2024
		BS EN71-4:2020	BS EN71-4:2020+A1:2025
		BS EN71-13:2021+A1:2022	BS EN 71-13:2021+A2:2024
II	Children's High Chairs and Multi-Purpose High Chairs for Domestic Use	BS EN14988:2017+A1:2020	BS EN 14988:2017+A2:2024
		ISO 9221-1:2015	ISO 9221:2024
		ISO 9221-2:2015	ISO 9221:2024
	Children's Paints	BS EN71-3:2019+A1:2021	BS EN 71-3:2019+A2:2024
	Playpens for Domestic Use	ASTM F406-22	ASTM F406-24
	Wheeled Child Conveyances	AS 2088:2022	AS 2088:2022 (Incorporating Amendment 1:2024)

The updates will take effect on 1 August 2026.

B | Textiles & Furniture

B.1 Safety Requirements for Infants‘ and Children’s Clothing in China, the EU and the U.S.

To help parents and practitioners clearly understand the safety regulations for infants' and children's clothing, this document summarizes the core requirements of chemical safety, physical safety, labeling and marking in China, the European Union and the United States, and is prepared as easy-to-understand promotional materials to promote knowledge of children's clothing safety.

Safety Requirements for Infants' and Children's Clothing in China

China adopts GB 31701-2015 Safety Technical Code for Infants and Children Textile Products as the core mandatory standard, covering clothing for children under 14 years old. It is also supported by GB 46523-2025 General Safety Requirements for Children's Products to comprehensively control safety risks of children's clothing.

Chemical Safety Control:

- Formaldehyde limit: ≤20 mg/kg for infant clothing (≤ 36 months), ≤ 75 mg/kg for children's clothing in direct contact with skin, and ≤ 300 mg/kg for clothing not in direct contact with skin.
- Carcinogenic aromatic amine dyes that can be decomposed are strictly prohibited. The pH value is limited to 4.0–7.5. Hazardous substances such as heavy metals (lead ≤ 90 mg/kg) and odor are controlled.
- Illegal additives such as fluorescent whitening agents and harmful flame retardants are banned to ensure skin-friendly fabrics free of chemical irritation.

Physical Safety Protection:

- Cords and drawstrings are prohibited on the head and neck of clothing for children under 7 years old to prevent entanglement and suffocation.
- Small accessories such as buttons, zippers and decorative fasteners shall have sufficient tensile strength to prevent falling off and accidental ingestion by infants.
- Clothing shall have no sharp edges or burrs, and fabrics shall be free of damage or defects to avoid scratches and bruises.

Labeling and Marking Requirements:

- The following must be labeled: product size, fiber content, safety category (Class A for infant products), washing instructions, manufacturer information and product standard number. Products without labels or incomplete label information are prohibited from sale.

Safety Requirements for Infants' and Children's Clothing in the European Union

The EU has established a strict safety control system for children's clothing based on REACH Regulation, EN 14682 (Safety of Cords for Children's Clothing) and EN 71 (Safety of Toys and Children's Products), applicable to products circulated in all EU member states.

Chemical Safety Control:

- REACH Regulation strictly restricts more than 300 hazardous chemicals. Carcinogenic and sensitizing dyes are prohibited. The total content of phthalates ≤0.1%, and nickel release ≤0.2 μg/cm²/week.
- Formaldehyde limit is stricter than China's: formaldehyde content of infant clothing <16 mg/kg. New pollutants such as PFAS and heavy metals are fully regulated, leading the world in chemical safety requirements.

B | Textiles & Furniture

B.1 Safety Requirements for Infants' and Children's Clothing in China, the EU and the U.S.

Physical Safety Protection:

- Cords and drawstrings are strictly prohibited on the hood and collar of outerwear for children aged 0–7. For children aged 7–14, hood and collar cords shall have no free ends. The exposed length of cords on the waist, cuffs and other parts is strictly limited to prevent dragging, tripping and entanglement.
- High requirements for tensile strength and anti-falling off of small parts. All accessories have no sharp edges. Fabric flammability complies with EU flame retardant regulations to prevent fire and suffocation risks.

Labeling and Marking Requirements:

- Labels shall include fiber content, care instructions, size, origin and EU compliance marks. Imported products shall be accompanied by instructions related to CE certification. Labels shall be in the official language of EU member states with clear and durable information.

Safety Requirements for Infants' and Children's Clothing in the United States

The U.S. implements strict supervision by the Consumer Product Safety Commission (CPSC) based on CPSIA (*Consumer Product Safety Improvement Act*), ASTM F1816 (Cord Safety) and 16CFR (Flammability Standards).

Chemical Safety Control:

- Lead content in fabrics ≤ 100 ppm, lead content in surface coatings ≤ 90 ppm, total content of 6 phthalates ≤ 0.1%.
- Strict flame retardant requirements are enforced. Children's sleepwear and daily clothing must meet flammability standards. Hazardous chemical flame retardants are prohibited to ensure safe contact for children.

Physical Safety Protection:

- Cords and drawstrings are prohibited on the neck and hood pockets of children's clothing. Exposed length of waist cords ≤ 7.5 cm. Knots and accessories on cord ends are prohibited.
- Small accessories shall meet firmness requirements with no easy-to-fall-off or swallowable parts. Clothing has no sharp edges to fully prevent physical injuries and suffocation risks.

Labeling and Marking Requirements:

- Labels shall include product size, fiber content, origin, flame warning (for sleepwear), and manufacturer information. Imported products must complete CPC certification and be accompanied by compliance documents before entering the U.S. market.

C | Consumer Products

C.1 EU Approves to Amend REACH to Restrict 2,4-Dinitrotoluene (2,4-DNT)

On 21 April 2026, the European Commission approved and published the Regulation (EU) 2026/859 to add the new Entry 83 to Annex XVII to the EU REACH Regulation (EC) No 1907/2006, which restricts 2,4-dinitrotoluene (2,4-DNT, CAS No. 121-14-2) in articles to be placed on the EU market. The amendment shall enter into force on 11 May 2026 and apply on 11 May 2027 (i.e., 12 months later).

Requirement:

2,4-Dinitrotoluene (2,4-DNT) shall not be placed on the EU market, or used, as a substance in articles for professional users or the general public, in a concentration equal to or greater than 0.1% (1000 mg/kg).

Exemption:

The restriction does not apply to:

- Certain explosives.
- Articles for military use.
- Ammunition for use, in accordance with EU Member States national law(s), by the police or other security forces.
- Toys within the scope of the EU Toy Safety Regulation (EU) 2025/2509 (TSR).
- Devices within the scope of the EU MDR Regulation (EU) 2017/745.
- Articles intended to come into contact with food, within the scope of the EU FCM Framework Regulation (EC) No 1935/2004.
- Articles placed on the EU market before 11 May 2027.

The transition period for products for use, or used in certain components of motor vehicles is 36 months instead of 12 months, i.e., the limit will apply from 11 May 2029.

2,4-Dinitrotoluene (2,4-DNT) is a chemical which were used in production of toluene diisocyanate (TDI) (which is used for the manufacture of flexible polyurethane foams), and as gelatinizing-plasticizing agent for the manufacture of explosives. The substance is classified as a Carc. 1B, Muta. 2 and Repr. 2 substance in the EU CLP Regulation (EC) No 1272/2008. As a result, the 2,4-DNT content limit in the mixtures placed on the EU market for supply to the general public is 0.1% (1000 mg/kg) according to the EU REACH Annex XVII Entry 28. The substance is also identified as an SVHC substance on 13 January 2010 and included into Annex XIV of REACH Regulation (EC) No 1907/2006 with a sunset date of 21 August 2015.

C | Consumer Products

C.2 EU Publishes Guidance (C(2026) 2151) & FAQ on EU PPWR Regulation

On 30 March 2026, the European Union released the draft guidance and Frequently Asked Questions (FAQs) for the Regulation on Packaging and Packaging Waste (PPWR) (EU) 2025/40. This draft guidance focuses on interpreting core requirements including hazardous substance control, recyclability implementation, and harmonised labelling, and further clarifies the enforcement standards following the official entry into force of the Regulation on 12 August 2026.

Provisions on PFAS Restrictions for Food Contact Packaging

The draft guidance recommends a three-step testing approach for compliance assessment:

- Conduct quantitative testing for Total Fluorine (TF); products with results below 50 mg/kg are deemed compliant.
- If the total fluorine content exceeds 50 mg/kg, employ methods such as pyrolysis-GC/MS to distinguish whether fluorine is organic fluorine (PFAS) or inorganic fluorine. Products with organic fluorine content below 50 mg/kg shall still be judged compliant.
- Directly test samples via the Total Oxidisable Precursors (TOP) analysis method to verify compliance with concentration limits of 25 µg/kg and 250 µg/kg.

The European Commission states that based on available evidence, products meeting the total fluorine criteria can concurrently satisfy PFAS limit requirements. The EU is also advancing the development of a unified PFAS testing protocol:

- PFAS control applies equally to both intentionally added and unintentionally present substances with identical limit values. The EU has no plans to issue a restricted PFAS list for the time being, with controls covering all substances meeting the definition of PFAS.
- The draft guidance clarifies that packaging placed on the market prior to August 12, 2026, may continue to be sold without mandatory recall. All food contact packaging placed on the market from August 12, 2026, must comply with PFAS limit requirements. The definition of "placing on the market" refers to the transfer of ownership or possession; for imported packaging, the benchmark is the completion of customs clearance for free circulation.

Arrangements for Substances of Concern (SoC)

The European Commission plans to complete a dedicated assessment by 2033 to review the effectiveness of current regulations in reducing the levels of Substances of Concern in packaging. The assessment findings will serve as a key basis for deciding whether to introduce additional concentration limits.

Phased Implementation of Packaging Recyclability:

In accordance with regulatory provisions, all packaging placed on the market must meet basic recyclability requirements starting from August 12, 2026. Manufacturers shall only comply with recyclability criteria set out in the Packaging and Packaging Waste Directive (PPWD) and the harmonised standard EN 13430:2004 until January 1, 2030, after which the implementing acts issued by the EU shall prevail.

Specifications for Harmonised Packaging Labelling:

The draft guidance stipulates that following the rollout of the EU's unified packaging composition information labelling system, Member States shall not retain national labelling alongside the unified label. This measure aims to safeguard the single market, prevent consumer confusion, and reduce cross-border compliance costs for enterprises.

D | Food Contact Materials

D.1 Malaysia Updates Lead & Cadmium Rules for Ceramic Ware

Malaysia has issued the Food (Amendment) Regulations 2026 (P.U. (A) 48), which amends Regulation 28 on ceramic ware and updates the Thirteenth Schedule (Table I) relating to the migration/release of lead and cadmium. The amendments take effect on 1 August 2026. To ensure safety, manufacturers must test at least 4 samples of a product. The amount of lead and cadmium released must stay below table I levels.

A notable update is the introduction of the term “cooking appliance”, defined as ceramic ware intended to be heated by conventional thermal methods or microwaves. Correspondingly, a new ceramic ware category, “cooking ware,” is added into Table I, with specific lead and cadmium release limits.

While the existing categories—large hollow ware, small hollow ware, and flat ware—retain the same numerical limits as previously stated, the revised table also clarifies the test acceptance criteria for compliance (i.e., whether all specimens must be within limits or whether an average is applied for flat ware).

Table I

Ceramic Ware Type	Lead Limit	Cadmium Limit	Criteria (Acceptance Rule)
Large hollow ware	1.0 mg/L	0.25 mg/L	All specimens ≤ limit
Small hollow ware	2.0 mg/L	0.5 mg/L	All specimens ≤ limit
Cooking ware ***(new category)***	0.5 mg/L	0.05 mg/L	All specimens ≤ limit
Flat ware	0.8 mg/dm²	0.07 mg/dm²	Average ≤ limit

E | Electronic & Electrical Products

E.1 Updated Issue of HKCA 1049 Specification – Performance Specification for RFID Equipment

The updated HKCA 1049 Issue 2 specification sets out an updated technical and evaluation for Radio Frequency Identification (RFID) equipment operating in the 865 – 868 MHz and/or 920 – 925 MHz band. These devices should meet the Office of the Communications Authority's (OFCA) this updated requirement under Hong Kong Telecommunications Equipment Evaluation and Certification (HKTEC) Scheme before launching for sale in Hong Kong market.

Updates in Technical Requirements

865 – 868 MHz Band

- RFID equipment shall comply with the technical requirements specified in the standard ETSI EN 302 208 "Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W and in the band 915 MHz to 921 MHz with power levels up to 4 W; Harmonised Standard for access to radio spectrum" published by the European Telecommunications Standards Institute (ETSI) When resistors are used as protective impedance: 10 samples must pass a 21-day damp heat test and impulse voltage test, with resistance change ≤ 10%
- The peak output power of the equipment shall not exceed 2 W effective radiated power (e.r.p.).
- The power of any spurious emission shall not exceed the corresponding frequency band indicated below:

Operating Band	Spurious Emission Level
47 – 74 MHz 87.5 – 118 MHz 174 – 230 MHz 470 – 862 MHz	e.r.p. not to exceed 4 nW
Other frequencies below 1000 MHz	e.r.p. not to exceed 250 nW
Frequency above 1000 MHz	e.r.p. not to exceed 1 μW

920 – 925 MHz Band

- RFID equipment shall comply with the technical requirements specified in Title 47 of the Code of Federal Regulations, Part 15, Section 247 (47 CFR 15.247) of the United States, except those set out in this specification.
- The equipment shall use frequency hopping spread spectrum modulation.
- The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz. The equipment shall use at least 10 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 4 second period.
- The peak transmitter power shall not exceed 1 W and the equivalent isotropically radiated power (e.i.r.p.) from the equipment shall not exceed 4 W.
- The peak transmitter power shall not exceed 1 W and the equivalent isotropically.
- Radiated power (e.i.r.p.) from the equipment shall not exceed 4 W.

Updates in Evaluation Requirements:

Compliance of the RFID equipment with the technical requirements shall be evaluated in accordance with the procedures specified in in the respective standards given in ETSI EN 302 208 and/or Title 47 of the Code of Federal Regulations, Part 15, Section 247.

E | Electronic & Electrical Products

E.2 Recent Changes to Korea's KC Certification: Updated Safety Standard for Household Battery Chargers and Simplified Certification for 5 Home Appliance Categories

The Korean Agency for Technology and Standards (KATS) recently issued two major announcements that will impact manufacturers of electronics and home appliances targeting the Korean market. One introduces stricter safety requirements for battery chargers, while the other significantly simplifies the certification process for five home appliance categories, reducing the compliance burden for exporters.

Updated Safety Standard for Household Battery Chargers

Announcement No.: KATS Notification No. 2026-23

- Key Change: Revision to KC 60335-2-29 Particular requirements for battery chargers
- Responsible Body: KATS

Revision Details and Scope

The revised standard aligns with the international standard IEC 60335-2-29:2019 (Ed. 6), in line with the International Electrical Safety Management Agreement. It applies to battery chargers for household, commercial, and similar use, including:

- Chargers for mobile phones, digital devices, and small household appliances;
- Battery chargers for electric tools and gardening equipment.

The new requirements focus on safety for chargers used in non-industrial environments such as homes, garages, shops, and farms.

Transition Period

- From 5 February 2026: The new standard is effective and applications for KC certification may follow the new version.
- 5 February 2026 – 5 February 2027: One-year coexistence period – both the new standard and the previous version (Notification No. 2025-402) are accepted.
- From 6 February 2027: the old standard is fully withdrawn, and compliance with the new version is mandatory.

Simplified Certification for 5 Home Appliance Categories (Effective 1 April 2026)

- Announcement No.: KATS Notification No. 2026-95

  Products Included (reclassified under the "Safety Confirmation" scheme:

  - Vacuum cleaners (dry, wet, steam, high-pressure cleaners, etc.)
  - Electric washing machines, dehydrators, and washer-dryer combos
  - Electric dryers (rotary dryers, hand dryers, garment care systems, etc.)
  - Microwave ovens (300 MHz – 30 GHz band)
  - Bathroom appliances (self-cleaning bidets, electric toilet seats, waste suction devices, etc.)

E | Electronic & Electrical Products

E.2 Recent Changes to Korea's KC Certification: Updated Safety Standard for Household Battery Chargers and Simplified Certification for 5 Home Appliance Categories

Key Changes – From "Safety Certification" to "Safety Confirmation"

Aspect	Previous (Safety Certification)	New (Safety Confirmation) (2026-95)
Factory Inspection	Mandatory (initial + annual)	Eliminated – no inspections required
Certificate Validity	5 years, subject to annual renewal	Unlimited – remains valid indefinitely
Certification Process	Testing + factory inspection + issuance (long cycle)	Only product testing – simpler and faster
Regulatory Focus	Factory quality system + product sampling	Product testing + post-market surveillance

Transition and Existing Certificates

- From 1 April 2026: New applications will follow the Safety Confirmation procedure – factory inspections are waived.
- Existing Safety Certificates: Automatically recognised as Safety Confirmation certificates – no need to reapply or undergo new inspections; they remain valid permanently.
- Pending Applications: Any Safety Certification application already submitted before the new rule takes effect will be automatically converted to the Safety Confirmation process – no additional documents required.

E | Electronic & Electrical Products

E.3 Strict Oversight Intensified: SAMR Strengthens Management of China Compulsory Certification (CCC)

On 16 April 2026, the State Administration for Market Regulation (SAMR) held a press conference focused on tightening oversight of China Compulsory Certification (CCC). Emphasizing a consistently strict approach, the SAMR announced a special action to safeguard CCC compliance across the entire chain — aiming to improve market order, raise product safety levels, and create a more reassuring consumer environment.

Key Measures

- Full-chain Supervision

Stricter entry conditions for designated CCC certification bodies and labs, with regular capability assessments to ensure a dynamic, merit-based system of entry and exit. Enhanced random inspections and certification effectiveness checks will be carried out, alongside “dual investigations” into safety incidents involving CCC-certified products — examining both manufacturers and certification bodies, with zero tolerance for fraudulent certification and public disclosure of major cases.

- Accountability of Certification Entities

Designated bodies and labs must strengthen internal controls, assign clear responsibilities, and monitor the entire certification process. Close alignment between certified products and test samples will be enforced; certification bodies must rigorously review manufacturer samples and ensure ongoing compliance of production quality systems.

- Improved Regulatory Framework

Revisions to the Regulations on Certification and Accreditation and the Management Measures for CCC Bodies and Labs will introduce stronger legal obligations and enforcement tools. The scope of CCC will be adjusted based on development needs and public concerns, including adding products related to industrial, public, and personal safety. Updated implementation rules for automobiles, power banks, children’s products, etc., will refine certification models, tighten post-certification oversight, and strengthen source control.

- Coordinated Enforcement

Integration of legal, credit-based, and smart regulation, leveraging the full “toolbox” of market supervision to enhance precision and traceability. Local authorities are tasked with cracking down on sales of uncertified products. Technical expert groups will be strictly managed, while inter-agency collaboration and information sharing will be strengthened to ensure unified and effective action.

F | Rail Transit

F.1 Rail Vehicle Environmental Assessment IV: Bag Method for Formaldehyde and TVOC Testing by Vehicle Manufacturers

The test specimen is placed into a fluoroplastic sampling bag of specified specifications (e.g., polyvinyl fluoride, polytetrafluoroethylene, and PTFE-hexafluoropropylene copolymer). The bag is then filled with a certain volume of nitrogen and sealed. After heating at a given temperature for a specified time, the gas inside the bag is sampled for analysis.

TVOC is collected using a porous polymer sorbent tube packed with 2,6-diphenyl-p-phenylene oxide (referred to as “Tenax TA tube”) and analyzed by thermal desorption–gas chromatography–mass spectrometry (TD GC MS). Aldehydes and ketones are collected using a 2,4 dinitrophenylhydrazine (DNPH) sampling tube, and after elution, they are determined by high performance liquid chromatography (HPLC).

No.	Vehicle Manufacturer	Standard	Standard No.
1	CRRC Changchun Railway Vehicles	Technical Specification for Formaldehyde and Volatile Organic Compounds in Main Interior Parts and Materials	SJTY-ZT-002
2	CRRC Tangshan Railway Vehicle	Technical Specification for Formaldehyde and Volatile Organic Compounds in Main Interior Materials and Components	TCF00000222499
3	CRRC Qingdao Sifang	General Technical Requirements for TVOC Control of Non metallic Materials and Components for Rail Vehicle Interiors	SFT NS GHJT 001
4	CRRC Puzhen	Technical Specification for Controlling Formaldehyde and Volatile Organic Compounds (VOC) in Main Interior Materials and Components for Rail Vehicles	Q/PC05 145-2020
5	CRRC Zhuzhou Locomotive	General Technical Requirements for Control of Formaldehyde and TVOC of Non metallic Materials and Components in Rail Transit Vehicles (Trial)	0207A005656
6	CRRC Corporation Limited	Volatile Organic Compounds in Rail Transit Vehicles – Part 1: Control Requirements and Limits	Q/CRRC J 225.1-2024
		Volatile Organic Compounds in Rail Transit Vehicles – Part 2: Test Methods	Q/CRRC J 225.2-2024

F | Rail Transit

F.1 Rail Vehicle Environmental Assessment IV: Bag Method for Formaldehyde and TVOC Testing by Vehicle Manufacturers

Manufacturer Method	Version	Conditioning Requirements	Conditioning Time	Nitrogen Charge	Test Temperature, Duration
CRRC Changchun: SJTY ZT 002	H	The storage of test specimens shall avoid contamination by chemical substances or influence from heat, humidity, or other factors. The storage duration and conditions shall be reported.	≥ 24 h	50%	25±1 °C, 16±0.5 h
CRRC Tangshan: TCF00000222499	E	Specimens shall be conditioned for no less than 24 h under the following conditions: a) Ambient temperature: (25±1) °C; b) Ambient relative humidity: (50±5) %; c) Air flow velocity: ≤0.3 m/s.	≥ 24 h	50%	25±1 °C, 16±0.5 h
CRRC Sifang: SFT-NS-GHJT-001	08	Pre-test conditioning: Condition at 23±2 °C, 50±5 % RH for 24±0.5 h; do not remove the aluminum foil packaging during conditioning.	24±0.5 h	50%	25±1 °C, 16±0.5 h
CRRC Puzhen: Q/PC 05 145 2020	2020	Specimen conditioning for no less than 24 h under the following conditions: a) Ambient temperature: (23±2) °C; b) Ambient relative humidity: (50±10) %; c) Air flow velocity: ≤0.3 m/s.	≥ 24 h	50%	23±2 °C, 16±0.5 h
CRRC Zhuzhou: 0207A005656	A	Condition at 25±1 °C, 50±5 % RH for 24±0.5 h; do not remove the aluminum foil packaging during conditioning.	24±0.5 h	50%	25±1 °C, 16±0.5 h
CRRC: Q/CRRC J 225.2 2024	2024	The conditioning time for the test specimen shall not be less than 24 h under the following conditions: a) Ambient temperature: (25±1) °C; b) Ambient relative humidity: (50±5) %RH; c) Air flow velocity: ≤0.3 m/s.	24 h	50%	25±1 °C, 16±0.5 h

F | Rail Transit

F.1 Rail Vehicle Environmental Assessment IV: Bag Method for Formaldehyde and TVOC Testing by Vehicle Manufacturers

Test Specimen and Sampling Bag Requirements

No.	Material / Component		Sampling Requirement	Bag Volume (L)	Remarks
1	Metal Pray Coated Products		1m × 1m or 1m²	1,000	/
2	Sheet Materials	Plywood, Veneered Plywood	1m × 1m or 1m²	1,000	/
		High Pressure Decorative Laminate (HPL)	1m × 1m or 1m²	1,000	/
		Engineering Plastic Sheet	1m × 1m or 1m²	1,000	/
		Fiber Reinforced Sheet	1m × 1m or 1m²	1,000	/
		Sandwich Structure Composite Panel	1m × 1m or 1m²	1,000	/
		Other Composite Panels	1m × 1m or 1m²	1,000	/
3	Floor Covering (Floor Cloth)		1m × 1m or 1m²	1,000	/
4	Carpet		1m × 1m or 1m²	1,000	/
5	Seats	Two Person Seat	Actual part	2,000	First Class / Second Class Car
		VIP Seat	Actual part	2,000	Individual Seat
		Driver's Cab Seat	Actual part	1,000	Excluding Seat Base
		Flip Seat / Folding Seat (Side Seat)	Actual part	50	/
6	Luggage Rack		Actual Part if Length 1–1.5 m; Trim to 1–1.5 m if >1.5 m	2,000	Glass and Metal Parts Excluded
7	Sleeper Berth		Actual Part	2,000	Hard Sleeper, Soft Sleeper, Sleeper Backrest
8	Curtains / Sunshades	Curtain Assembly	1m × 1m or 1m²	1,000	/
		Sunshade Assembly	1m × 1m or 1m²	1,000	/
9	Air Ducts:	Main Supply Air Duct, Exhaust Air Duct	Outer Surface Area 1.5 m²	1,000	/
		Other Air Ducts	Outer Surface Area 0.1 m²	1,000	/
10	Interior Gangway Bellows		1m × 1m or 1m²	1,000	Raw Material of Bellows Fabric
11	Wires and Cables (Interior)		1m	50	/
12	Protective Braided Sleeving or Conduit for Wires and Cables		1m	50	/
13	Rubber Sealing Strips		1kg	50	/
14	Rubber Sheets (Sound / Thermal Insulation Pads, Adjustment Pads, etc.)		1m × 1m or 1m²	1,000	/
15	Rubber Foam Materials		1m × 1m or 1m²	1,000	/
16	Thermal Insulation Material (Cold Proof Material)		1m × 1m or 1m²	1,000	/

F | Rail Transit

F.1 Rail Vehicle Environmental Assessment IV: Bag Method for Formaldehyde and TVOC Testing by Vehicle Manufacturers

Quantitative Analysis Results (Template)

No.	Substance	CAS No.	Collected Amount (μg/tube)	Emission (mg/m³)	Method Detection Limit (mg/m³)
1	Formaldehyde	50-00-0	(Testing Result)	(Testing Result)	0.005
2	Acetaldehyde	75-07-0	(Testing Result)	(Testing Result)	0.005
3	Acrolein	107-02-8	(Testing Result)	(Testing Result)	0.005
4	Benzene	71-43-2	(Testing Result)	(Testing Result)	0.004
5	Toluene	108-88-3	(Testing Result)	(Testing Result)	0.004
6	Ethylbenzene	100-41-4	(Testing Result)	(Testing Result)	0.004
7	Xylenes	1330-20-7	(Testing Result)	(Testing Result)	0.004
8	Styrene	100-42-5	(Testing Result)	(Testing Result)	0.004
9	Ethyl acetate	141-78-6	(Testing Result)	(Testing Result)	0.004
10	Butyl acetate	123-86-4	(Testing Result)	(Testing Result)	0.004
11	Butyl butyrate	109-21-7	(Testing Result)	(Testing Result)	0.004
12	2 Butanone (MEK)	78-93-3	(Testing Result)	(Testing Result)	0.004
13	Octamethylcyclotetrasiloxane	556-67-2	(Testing Result)	(Testing Result)	0.004
14	Methyl methacrylate	80-62-6	(Testing Result)	(Testing Result)	0.004
15	Benzaldehyde	100-52-7	(Testing Result)	(Testing Result)	0.004
16	Trimethylbenzenes	25551-13-7	(Testing Result)	(Testing Result)	0.004

N

Top 10 Substances by TVOC Concentration (Template)

No.	Substance	CAS No.	Collected Amount (μg/tube)	Emission (mg/m³)	Method Detection Limit (mg/m³)
1	/	/	(Testing Result)	(Testing Result)	0.004
2	/	/	(Testing Result)	(Testing Result)	0.004
…	…	…	…	…	…
10	TVOC (C6-C16)	/	(Testing Result)	(Testing Result)	/

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